

HISTORIC BUILDINGS EVALUATION REPORT

For

Section 248 Review

Kingdom Community Wind

Lowell, Vermont

Prepared for:

Green Mountain Power
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1. INTRODUCTION

Section 248 requires the Public Service Board to make a finding that the proposed Kingdom Community Wind (KCW) Project (“Project”) will not have an undue adverse effect on, among other things, historic sites. A historic site is defined as “any site, structure, district or archeological landmark which has been officially included in the National Register of Historic Places and /or the State Register of Historic Places or which is established by the Vermont Advisory Council on Historic Preservation as being historically significant.” [10 VSA Section 6001 (9)]. This report describes the work undertaken by Liz Pritchett according to standards set forth in Vermont Section 248 (b)(5) criteria specified in [10 VSA 6086(a)(8)] for review of historic sites, structures and districts in the vicinity of the proposed Kingdom Community Wind Project, and her assessment of any potential impacts to identified historic sites. Ms. Pritchett’s conclusion is that the Project would pose an adverse impact to historic sites, but the overall effect of the undertaking would not be undue.

To conduct this review, standards were followed that are used by the Vermont Division for Historic Preservation (VDHP) and have been applied in other Act 250 and Section 248 cases. These standards are essentially borrowed from those set forth in regulations established by the Advisory Council on Historic Preservation to implement Section 106 of the National Historic Preservation Act (36 CFR 800). Project review identifies potential impacts to historic buildings, structures, historic districts, historic landscapes and settings, and to known or potential archeological resources.

Literature review involved research of town files at the VDHP offices in Montpelier, Vermont. The purpose of the VDHP file search was to inventory significant historic sites in the APE that are currently listed on the National Register of Historic Places (NR) and the Vermont Historic Sites and Structures Survey (also called the State Register/ SR), or have been determined NR or SR eligible by the Vermont Advisory Council on Historic Preservation. Project files previously reviewed by the VDHP for Act 250 or Section 106 within in the APE were also investigated. Reference materials include information regarding the Project provided by Landworks and VERA.

Fieldwork involved site visits to the surrounding area to identify districts or sites with significant historic buildings over fifty years of age, which were determined to either be within the Project’s footprint or potentially have views of the Project. The **Area of Potential Effect (APE)** comprises a 10-mile radius from the center of the proposed wind turbine locations on the Lowell Mountains in the southeastern portion of the Town of Lowell. The four towns within the APE that primarily fall within the five-mile radius of the Project are Lowell, Albany, Eden and Craftsbury. Thirteen towns at the outer edges of the APE are portions of Westfield, Troy, Newport, Irasburg, Coventry, Barton, Glover, Greensboro, Wolcott, Hyde Park, Johnson, Belvidere, and Montgomery.

Liz Pritchett drove all major public roads within the 10-mile radius, focusing primarily within a 5-mile radius from the Project area on VT Routes 14, 58, and 100. Within the 5-mile radius, Ms. Pritchett drove all passable public roads. The fieldwork in the 5-mile radius focused on the towns of Lowell, Albany, Craftsbury and Eden. Surrounding these core towns at a distance of 5 to 10 miles from the Project are the towns of Westfield, Troy, Newport, Coventry, Irasburg, Barton, Glover, Greensboro, Wolcott, Hyde Park, Johnson, Belvidere, and Montgomery.

Although within the 10-mile radius, these surrounding towns were determined less of a concern for potential impacts due to the lack of significant visual impacts of the Project according to the LandWorks viewshed maps and the towns' distance of generally more than five miles from the Project. (The LandWorks report on the viewshed is provided as part of the Petition submission to the Public Service Board.)

After conducting fieldwork, literature review, and review of other relevant materials, the Project's potential effects to historic resources were assessed. The three-part test for evaluating impacts on historic sites known as the *Middlebury* analysis was applied to determine the potential effect of the Project. In addition, the *Criteria for Evaluating the Effect of Proposed Telecommunications Facilities, Transmission Lines, and Wind Power Facilities on Historic Resources* for both Indirect Impacts and Direct Impacts were also applied to determine the effect of the Project; these fourteen criteria were developed by the VDHP.

2. DESCRIPTION OF THE PROPOSED PROJECT

Kingdom Community Wind is proposed along a 3-mile portion of the Lowell Mountain range in the southwest corner of the Northeast Kingdom community of Lowell, in Orleans County, Vermont. Farming and logging have long roots in Lowell and the property on which KCW is proposed has been a working timber farm for generations. This site consists of 2000+/- acres of privately-owned land. The Project will consist of 20-21 turbines, each of which would be 410 feet to 443 in height to the tip of the blade, together with related infrastructure. Some of the turbines will have red flashing lights for nighttime aviation safety. The new transmission line will extend between the collector system and the turbines on the ridgeline to four substations consisting of the new KCW Substation on the access road to the ridgeline, two existing Vermont Electric Company (VEC) substations, one in Lowell and one in Jay, both of which will be upgraded, and the new VEC Jay Trap Substation just south of Route 105 in Jay. The majority of the alignment will consist of an upgraded existing VEC transmission line that extends within the right-of-way along Routes 100 and 105. A 5 to 10 foot increase in pole height is planned.

The 2.5 mile gravel access road from Route 100 in Lowell to the Lowell Mountain ridgeline will be typically 18 feet wide and 32 feet wide at turnouts to allow for vehicle passing. The road between the turbines on the ridgeline will be about 34 feet wide. An electric collection system will consist of an underground 34kV line connecting the turbines along the ridgeline and an overhead 34kV line on wooden poles approximately 43-52 feet in above-ground height to the KCW substation midway on the access road where a steel side maintenance building 70 feet long, 30 feet wide and 30 feet high will also be located. The substation and maintenance building will be located in a wooded area. The approximately 140 feet by 140 feet by 45 high substation, with features typical of other substations in the project, will consist of open steel structures, a transformer, a concrete foundation, and perimeter fencing.

From the KCW Substation the collector system will extend on 35-52 foot poles to Route 100 where the transmission line will extend north 2.5 miles on approximately 35-52 foot tall poles to the VEC Lowell #5 Substation northeast of the intersection of VT Rte 58 and VT Rte 100. The new VEC Lowell #5 Substation will consolidate and replace the existing Lowell #5 and Irasburg #21 Substations that are currently located adjacent to each other on the east side of Route 100 just south of the Lowell Graded School. The new, improved Lowell #5 Substation will be located

within the existing footprint of the Irasburg #21 Substation, increasing in height from about 24 feet to 36 feet. The decommissioned Lowell #5 facility components will be removed.

The existing 10.4 mile transmission line between the Lowell #5 Substation, and the Jay #17 Substation located southeast of the intersection of State Route 242 and Cross Road, will be upgraded. The upgrade will involve several new sections of right-of-way to bring the line roadside where desirable and address existing right-of-way infringements from existing structures. The new line will be built in a similar configuration to the existing line single pole construction, with pole heights changing from 35-60 feet to 43-52 feet. The Jay 17 substation improvements will be within the substation fence, and the height of the tallest components will increase from 24 to 45 feet. The transmission line will continue north 2 miles from the Jay #17 substation along the existing distribution right-of-way east of Cross Road to the existing 46kV transmission line at the intersection of Route 105 and Cross Road. The pole heights in this segment will increase from 35-52 feet to 43-61 feet. From this intersection point west, the 46kV line will be reconducted to a new 46kV switching station (Jay Tap Switching Station) being constructed by VEC as a separate project from the Kingdom Community Wind project.

3. HISTORIC PRESERVATION FOCUS OF TOWNS IN PROJECT AREA

Pertinent information regarding historic sites and structures, and historic preservation guidelines or recommendations in the town plans for Lowell, Eden, Westfield and Craftsbury are summarized below. The other towns within the five-mile radius of the Project, Albany and Irasburg do not have town plans and are not included. All plans identify important historic sites, and scenic views or landscape elements considered worthy of preservation.

Lowell Town Plan

The 2003 Lowell Town Plan was readopted on April 14, 2009 with minor changes. Overall goals in the Plan that relate to historic resources include the goals “to maintain the Town’s beautiful rural character as much as possible” and “maintain that part of the Bayley-Hazen Military Road between Lowell and Albany, that is no longer maintained for vehicular use, for recreational uses.” The Town Planning Commission would like to see the scenic corridor along Route 58 from Lowell Mountain to Hazen’s Notch maintained with development that will not detract from enjoyment of views along the corridor. Significant historic resources noted include the Naramore General Store and the Baptist Church, which along with other buildings in the original Lowell village center just west of the intersection of Routes 100 and 58 “contribute to the quaint New England atmosphere found in the Village of Lowell. This atmosphere should be preserved.” Other resources noted of historic significance in the Plan are the Bayley-Hazen Road and the old asbestos mine on Mines Road near the Lowell/Eden town line. The Planning Commission recommends the development of renewable energy sources including wind energy.

Eden Town Plan

The 2007 Eden Town Plan lists its twenty-nine, extant historic resources that are entered in the State Register, including the two small historic districts of Eden Mills and the Eden Camp Historic District at Lake Eden. Scenic resources noted include Routes 100 and 118, Belvidere Pond, South Pond and Lake Eden, and the Green River Reservoir Viewshed at the southeast corner of the town. It lists as a policy, “Telecommunications towers and other large obvious structures should be carefully sited to minimize impacts on scenic resources.” Siting wind

towers near the Long Trail is not recommended, however the Plan does state that “there are also areas in town where private wind generation may be possible and this should be encouraged provided safety and aesthetic conservation are met.” A policy states “Eden supports its residents in using wind and solar to generate electricity locally provided scenic and aesthetic concerns are met.”

Westfield Town Plan

The Westfield Town Plan adopted in 2003 notes the rocky ledges of Hazen’s Notch, vast tracts of forest and the Missisquoi River as it meanders through the town as important scenic resources that contribute to the quality of life and economy of the residents. Primary goals include maintaining the rural character of the town evident in the open agricultural land and farms, and encouraging limited residential and commercial development along Route 100 south of the village of Westfield. Telecommunications facilities are recommended for appropriate areas that respect the integrity of residential areas, aesthetic concerns and natural resources, with structures designed to minimize aesthetic impacts. The Hitchcock Museum & Library, located in Westfield village, is described as “Westfield’s central historical landmark” that serves as a central meeting place for the community.

Craftsbury Town Plan

Adopted in 2006, the Craftsbury Town Plan emphasizes the significance of the Common and its importance as one of the largest examples of New England common land. The Plan claims “its picturesque quality...especially the view across the Common of the Church on the Common, is a favorite subject for photographers and one of the most published pictures of special Vermont scenes.” It also identifies the three State Register historic districts, Craftsbury Common, Craftsbury Village and East Craftsbury of historic interest. The Babcock House located on the west side of the Common, next to the Church on the Common and the new public library has recently been restored by the Craftsbury Historical Society. One objective of the Plan is to encourage the Craftsbury Historical Society to continue to emphasize the historic heritage of the town, the uniqueness of the Common and the value of preserving their historic architecture.

Northeast Vermont Development Association Regional Plan 2006

The NVDA Regional Plan supports wind energy as a resource to meet current and future needs. It lists among the criteria to consider for potential impacts from a wind project: 1) the appearance and operation of facilities as they could impact the essential character of an area, 2) siting the proposed turbines to minimize visual impacts, and 3) weighing the potential benefits as well as negative impacts on not only the host town but also the other towns which may be impacted by the proposed project.

CLG Programs

There are no Certified Local Governments in the Project area. The CLG program extends the federal and state preservation partnership to the local level. Towns that have applied for and have been awarded CLG designation include Burlington, Bennington and Rockingham. Through the CLG program, communities are able to benefit from federal historic preservation grants, technical assistance programs and other initiatives that can enhance preservation planning on the local level.

4. INVENTORY AND SIGNIFICANCE OF ARCHITECTURAL RESOURCES

The landscape comprising the 10-mile viewshed is a juxtaposition of rugged mountain terrain, open farmland, river valleys, and small rural villages. The area within the APE is more than 90% forested, and the topography is defined by the north-south Lowell Mountain Range at the center of the Project, and lower but similarly aligned ridges to the east in Albany, with the tallest peaks and ridgelines of the Green Mountains along the western region of the APE. The mountainous terrain with ridge roads that follow the height of land in portions of Lowell, Craftsbury and Albany, are separated by valleys where Routes 14 and 100 parallel the mountain ranges, and the Missisquoi River cuts through the low lands west of Route 100 where it flows northerly to the broad farm fields of Westfield and Troy.

The architectural resources within the APE are comprised of historic buildings over fifty years of age that represent the various periods of history and local activity in the towns surveyed. However, the scope of this research is not to identify each historic building in all the towns in the APE. While numerous historic buildings, both as historic districts and individual sites are recorded at the Vermont Division for Historic Preservation, and were found in the Project area during field visits, only those that were identified as both important architectural resources and having the potential to be adversely effected by the proposed Project are inventoried in this report. Overall, few resources met both these criteria – to be significant architectural resources and to be potentially adversely effected by the Project due to proximity to the turbines or visual impact by the turbines.

Relatively few sites are listed on either the State or National Registers in the towns within the APE compared to other surveyed areas in Vermont. Most of the historic resource survey work for Orleans and Lamoille County was conducted in the 1970s and early 1980s, so the existing forms are in need of updating for changes to sites and structures, as some buildings no longer exist or have been substantially altered, others will now be 50 years old or more and could be eligible for listing, and significant resources in areas overlooked during earlier surveys would likely qualify for listing. One area of importance that comprises a small but highly intact historic district and appears eligible for both the State and National Registers is the original Lowell Village that developed in the early 19th century along the banks of the Missisquoi River just west of the intersection of Routes 100 and 58.

National Register

Four individual sites within the APE are listed in the National Register of Historic Places (“NR”). These are the William Hayden House (1854) on Route 14 in Albany (listed 1978), District No. 4 School in Craftsbury (c. 1859, listed 2001), and in Irasburg, the Orne Covered Bridge (1879, listed 1974) and the Irasburg Town Hall (1911, listed in 1994). Of these four structures, only the Irasburg Town Hall has limited views of the Project, the other three structures are not within the viewshed.

A number of significant individual sites and districts (some of which are already entered in the State Register as discussed below) have been determined eligible for the NR based on file research of environmental review projects at the DHP. These resources include Tillotson Camp (1939) on the Long Trail in Lowell (M.J. Llewellyn Section 106 Review letter dated 7/25/2006), Craftsbury Village Historic District (Advisory Council vote on 10/25/84), East Craftsbury

Village (AC vote 9/22/87), Craftsbury Common Historic District (AC vote 1/18/84), Irasburg Green Historic District (AC vote 1985), United Church of Irasburg (AC vote 2005), the Irasburg General Store (AC vote 1998), and Westfield Village School (1860, AC vote 6/6/96). Of these sites, all but the Craftsbury Village Historic District have potential views of the Project.

State Register

Lowell

Breezy Acres (c. 1810), the Don and Shirley Nelson property on the Bayley-Hazen Road, was placed on the State Register ("SR") on 9/23/03. This property has the potential for impacts from the Project.

Eden

A total of 36 sites are entered in the State Register. Two are historic districts, the Eden Mills Historic District and the Eden Historic Camp District. Twenty-seven are individual sites, primarily vernacular houses, barns, and seasonal camps; the buildings on seven sites no longer exist. Of these sites, only the Eden Historic Camp District has been determined to have the potential for impacts from the Project.

Albany

The three sites entered in the State Register for Albany are the Hayden House (1854, also on the NR as noted above), and the Albany Town Hall (1867-68) and Albany Methodist Church (1842) in the village of Albany. Views of the Project from these sites will be minimal to none. Several sites not listed in the SR or NR but which appear eligible for both registers with the potential for impacts from the Project are included in the site summary table below.

Irasburg

Irasburg has three sites listed in the State Register. Of these sites only the United Church of Irasburg (1840/1872), located adjacent to the village green, has the potential for impacts from the Project.

Craftsbury

Craftsbury has 80 sites in its State Register survey. Three of the sites are significant historic districts, the Craftsbury Common Historic District, Craftsbury Village Historic District and East Craftsbury Historic District. The Craftsbury Common and East Craftsbury Historic Districts have the potential for impacts from the Project. While most of the individual sites in Craftsbury are beyond the 5 mile radius of the APE, a number of the sites could have the potential for impacts from the Project.

Westfield

Three sites are entered in the State Register, the Daigle Farmhouse (1837) on Carter Road, the Miller House (1901) on Route 100, and the Hitchcock Memorial Library and Museum (1899) in Westfield Village. The DHP files also contain draft survey forms for the Hazen Road Monument (1903), and two stone fireplaces (c. 1930?) built by the Civilian Conservation Corps, all on the Bayley-Hazen Road, Route 58, at Hazen's Notch. Significant sites in Westfield determined to have the potential for impacts from the Project include the Daigle Farmhouse and the Hitchcock Memorial Library and Museum.

Other towns in the APE

The core towns closest to the Project in the APE are surrounded by the towns of Barton, Belvidere, Cambridge, Coventry, Greensboro, Hyde Park, Johnson, Montgomery, Newport, Troy, and Wolcott. Due to topography and distance from the Project, no sites listed in or eligible for the State or National Registers in these surrounding towns were determined to have the potential for impacts from the Project.

Bayley-Hazen Road and the Long Trail

The Bayley-Hazen Road is highly significant as a Revolutionary War era military road and the first road in the town of Lowell. Built under orders of General Washington by Colonel Jacob Bailey and later abandoned by General Moses Hazen during the years 1776 to 1779, the historic transportation route extends in a northwesterly direction through Vermont from Wells River to Hazen's Notch. Within the APE, the road transverses Greensboro, Craftsbury, Albany, Lowell, Westford and Montgomery. When it was built, the Bayley-Hazen Road was the only road through the wilderness in this part of Vermont. The original Lowell Village (just west of the intersection of Routes 100 and 58), first called The Hollow, was cleared of virgin forest for a camp on the banks of the Missisquoi River for the men, horses and oxen who were building the road. Settlement of the original Lowell Village commenced after the war in 1803. The town was originally chartered in 1787 as Kelleyvale, but the name was changed to Lowell in 1831. Some of the historic route follows current roads such as Route 58 from the original village to Hazen's Notch, while other stretches, such as the portion in Lowell cutting through the Nelson property through the Lowell Mountains is not passable year around, but is popular as a recreation route for bikers and snowmobilers.

The Long Trail was built by the Green Mountain Club (GMC) between the years 1910 to 1930. According to the Section 106 letter by M. J. Llewellyn dated 7/25/06 for review of proposed repairs to the hiking shelter called Tillotson Camp, the Long Trail is the oldest long-distance hiking trail in the nation. Ms. Llewellyn determined that the Long Trail, with its trailside shelters and associated side trails, appears eligible for the National Register under Criterion A due to its association with the history of hiking in Vermont, and the movement to establish other long-distance hiking trails, and encourage enjoyment and appreciation of backcountry travel in Vermont and the US. This 270 mile "footpath through the wilderness" begins at the Vermont/Massachusetts border, crossing Vermont's highest peaks to the Canadian border. Within the westerly portions of the APE, the Long Trail extends along the ridge of the Green Mountains through Belvidere, Eden, Lowell, and Westfield. Two of the 70 primitive shelters on the Long Trail and located within the APE, are Tillotson Camp, a frame cabin with bunks for 8 built in 1939 at Tillotson Peak in Lowell, and Hazen's Notch Camp, a similarly sized cabin built in 1948 just north of Route 58. According to the *Green Mountain Club Long Trail Guide* (1996, Northlight Studio Press, Barre, VT), from the front of Tillotson Camp "there is a limited view to the east." Ben Rose, executive director of the GMC further claims that the views of the Lowell Mountains, especially at sunrise from the trail near Tillotson Camp and nearby Belvidere Mountain are noteworthy (phone interview, January 12, 2010).

Historic Resource Inventory Summary

While many historic districts and individual sites exist with the 10-mile viewshed area, due to topography, buildings and forested woodland, distant views are obscured from many vantage points. The process to determine the effect of the Project on the viewshed is explained below in

the Determination of Potential Effect. In accordance with the process to determine the effect for this particular undertaking comprising twenty to twenty-one wind turbines, the APE in which the potential for adverse effect could occur is from 0 to 10 miles. Therefore, based on fieldwork and file review for the Project, 16 sites listed below that are located from approximately 1 mile to 10 miles from the Project have been identified as both important architectural resources, either listed on or eligible for listing in the State or National Registers and having the potential to be affected by the proposed wind turbine Project. While other sites within the APE may seem similar to those listed in the Site Summary Table, those selected for the potential for adverse effect are the best, representative examples of historic resources in the APE that are both important historic resources and have the potential for effect from the Project. See Attachment A for site locations.

SITE SUMMARY TABLE

| Site # | Site name | Listed NR / SR | Approx. Distance from turbines |
|-------------------|--|-----------------------|---|
| LOWELL | | | |
| 1 | Tillotson Camp, Long Trail | Not listed | 7 mi. |
| 2 | Congregational Church, Lowell Village, Rte. 100 | Not listed | 3 mi. |
| 3 | Nelson Farm "Breezy Acres", Bayley-Hazen Road | SR | .83 mi. |
| WESTFIELD | | | |
| 4 | Hitchcock Memorial Library & Museum, Westfield Village | SR | 8.5 mi. |
| 5 | Daigle Farmhouse, Carter Road | SR | 8 mi. |
| IRASBURG | | | |
| 6 | Irasburg Green Historic District | Not listed | 7.8 mi. |
| 7 | Town Hall, on the Green | NR | 7.8 mi. |
| ALBANY | | | |
| 8 | Route 14 house and barn | Not listed | 2.25 mi. |
| 9 | Maple Valley Grange No. 450, Route 14 | Not listed | 2.5 mi. |
| 10 | Classic Cottage, Delano Road | Not listed | 4 mi. |
| 11 | Cape, Albany Center | Not listed | 3.5 mi. |
| 12 | East Albany Church | Not listed | 5.2 mi. |
| CRAFTSBURY | | | |
| 13 | Craftsbury Common Historic District | SR | 6 mi. |
| 14 | Cape, 398 Ketchum Hill Road | SR | 7.75 mi. |
| 15 | East Craftsbury Historic District | SR | 8 mi. |
| EDEN | | | |
| 6 | Eden Historic Camp District | SR | 3.5 mi. |

5-10 MILE RADIUS

LOWELL

1. Tillotson Camp (map site 1), 1939, 7 miles.

Photograph 1.

The Tillotson Camp, located on the Long Trail, approximately 7 miles from the Project has been determined eligible for the National Register. This small, primitive, rectangular, gable roof structure has flush, horizontal board siding, metal roofing, simple hinged shutters, and a stone pier foundation. It contains bunks for eight hikers. The structure resembles temporary buildings constructed as military barracks or cabins at children's summer camps. It is utilitarian, was simple to erect and requires little maintenance. The Project will be visible to the east from vantage points near the camp structure.

WESTFIELD

2. Hitchcock Memorial Library & Museum (map site 4), 1899, 8.5 miles.

Photographs 12, 13.

The Hitchcock Memorial Library & Museum, built in 1899 was a gift to the town by Aaron C. Hitchcock, a member of an early Westfield family. The building is listed in the State Register (site no. 1018-3). The Colonial Revival style, hip roof structure with its distinctive clock tower was constructed by William Elkins who also built the Queen Anne style home of Hiram O. Miller (1018-2), who was a descendant of one of the town's early families. This public building is approximately 8.5 miles from the Project.

3. Daigle Farmhouse (map site 5), 1837, 8 miles.

Photographs 14, 15

The Daigle Farmhouse is a two and one-half story, Georgian Plan, brick dwelling with a stone marker over the front entry that reads "J. Hodgkin-1837". The house is listed in the State Register (site no. 1018-1). According to the State Register, Jerre Hodgkin opened a general store in Westfield in 1818, and served as the town's representative to the Vermont Legislature in 1838-1839. Modern ground level stable barns are located north of the house. Views of the Project to the south would be 8 miles distant across the low farm fields.

IRASBURG

4. Irasburg Green (potential) Historic District (map site 6), 7.8 miles.

Photographs 16-18

The Irasburg Green, in the center of Irasburg Village, is approximately 7.8 miles from the Project. In 1985 the Advisory Council determined that the Green is eligible for the National Register. The open Green with its gazebo at the north end is surrounded by distinctive historic buildings including dwellings, a church, town hall, general store and post office and other structures. The Project would be southwest of the Green; however, views of the turbines would be limited due to the number of buildings and vegetation flanking all sides of the Green.

5. Irasburg Town Hall (map site 7), 1911, 7.8 miles.
Photograph 16

The Irasburg Town Hall is a two and one-half story, hip roof, Colonial Revival style building. Five, important, painted theater curtains by Charles Andrus, noted artist from Enosburg Falls, exist in the second floor theater space. The Irasburg Town Hall is the only known National Register listed structure in the APE that could have views of the Project. However, due to its distance from the Project, at approximately 7.8 miles, and the buildings and vegetation around the Irasburg Green adjacent to the Town Hall, little to no views of the Project from the Town Hall would be likely.

ALBANY

6. East Albany Church, c. 1875 (map site 12), 5.2 miles
Photographs 25, 26

The church in East Albany village that faces west toward the Lowell Mountains appears eligible for the State Register. This wood frame, gable roof structure has wood clapboard siding, an octagonal bell tower atop a tall square base, Greek Revival style paneled corner pilasters and box cornice returns, and tall multi-pane windows. Views to the west toward the project approximately 5.2 miles away will be prominent from the front of the church through the open fields across Creek Road.

CRAFTSBURY

7. Craftsbury Common Historic District (map site 13), 6 miles.
Photograph 27

The Craftsbury Common Historic District (SR 1006-1) is described in the SR Statement of Significance as a “rare, surviving hilltop village which is centered around a formal common.” The historic district is comprised of many fine examples of early 19th and 20th century vernacular architecture including two churches, and a towered academy. This village was the first settlement in Orleans County and the northeastern part of Vermont. The Common was originally used for training militia in the County. In 1797 potatoes were planted on the common by and for the town’s people. In 1799, elm trees were planted around the Common in memory of President George Washington who died that year; many of the trees no longer survive. When the academy was rebuilt in a distinctive vernacular High Victorian Gothic style following a fire in 1879, it was under the guidance of George Washington Henderson who was born into slavery and at the academy became the first black principal of a Vermont school. During the early 20th century the village became the seasonal residence of wealthy urbanites whose influence on the appearance of the district is still evident. The village was the setting for Alfred Hitchcock’s 1950s film, “The Trouble with Harry.” Currently the Common serves as a gathering place for recreation of the community. Views to the northwest from the Common of the Lowell Mountains will be limited at best due to distance, intervening buildings and wooded areas surrounding the district and beyond.

8. Old Babcock Place, c. 1800 (map site 14), 7.75 miles

Photographs 28, 29

The Old Babcock Place (SR 1006-43) is significant according to the State Register nomination as possibly the oldest house in town and a rare example of a very early Cape that may be the homestead of one of the original town proprietors and settlers – John Babcock. It was built c. 1800, and its west end porch from which one has broad views toward the Lowell Mountains was added c. 1940. The simple cape form, center entrance, modest trim with little eaves overhang, and slightly paired windows on the front elevation are all distinctive characteristics of early 19th century cape houses in Vermont.

9. East Craftsbury Historic District (map site 15), 8 miles

Photograph 30

East Craftsbury is described in the State Register form (1006-3) as a spacious, linear, farming village distinguished by early 19th and early 20th century architecture. Scottish immigrants were among its early settlers who developed a prosperous farming community. Among its notable buildings is the United Presbyterian Church (1909), a predominately Shingle Style building designed by Burlington architect Frank Lyman Austin. Views of the Project approximately 8 miles away to the northwest will be limited due to distance, intervening buildings and wooded areas within the district and beyond.

3 – 5 MILE RADIUS

ALBANY

10. Classic Cottage, Delano Road (map site 10), 4 miles.

Photographs 21, 22

This well-maintained and well-preserved house is an excellent example of a c. 1860 classic cottage with its characteristic five bay front facade, a kneewall above the first floor windows, an attached wing, and Greek Revival trim that includes peaked lintels over the six-over-six double hung windows, paneled corner pilasters, full entablature details, and box cornice returns below the roof eaves. The Lowell Mountains are located southwest of (behind) the house.

11. Cape (map site 11), Albany Center, 3.5 miles.

Photographs 23, 24

This c. 1840 cape is a good example of a vernacular Greek Revival style house in Vermont with its center entrance flanked by sidelights, pedimented gable trim and substantial corner pilasters. The rear ell has been modified in recent years. Views of the Project westerly from this dwelling in Albany Center across open fields will provide a broad vista of Lowell Mountains approximately 3.5 miles distant.

EDEN

12. Eden Historic Camp District (map site 16), 3.5 miles. Photographs 31, 32

The Eden Historic Camp District, comprised of four seasonal buildings representing the Shingle, Colonial Revival and Adirondack Rustic styles, is located at the southwest side of Lake Eden. The camps face southeasterly. Views of the Lowell Mountains, approximately 3.5 miles from the camps to the northeast, are largely obscured by other peaks that are in front of the Lowell range.

0-3 MILE RADIUS

ALBANY

13. Maple Valley Grange, Route 14 (map site 9), 2.5 miles. Photograph 20

The c. 1860 Maple Valley Grange, located on the west side of Route 14, approximately 2.5 miles from the Project, is a good example of a nineteenth century grange building with its typically simple, gable roof, rectangular form. While the two-over-two windows are regularly spaced, the front elevation has only an unadorned, off center, pedestrian door accessed by a modern ramp, but the prominent Greek Revival style corner pilasters topped with capitals enhance the character of the building. The building appears eligible for the State Register. It is located in a generally open area which it shares with two dwellings on the west side of Route 14 north of Albany village. The Lowell Mountain range is behind (west of) the buildings 2.5 miles in the distance.

14. Route 14 house and barn (map site 8), 2.25 miles Photograph 19

Located on Route 14 at the intersection with Shuteville Road, this c. 1850 cape with its later modifications consisting of the large front shed dormer and enclosed front porch appears eligible for the State Register. A historic barn is located south of the house. The buildings are approximately 2.25 miles from the proposed Project which will be visible as a backdrop behind the structures. The house and barn are surrounded by farm fields approximately .25 miles south of the Maple Valley Grange (see #13 above).

LOWELL

15. Lowell Congregational Church (map site 2), 3 miles. Photograph 2

The Lowell Congregational Church, located on the west side of Route 100 in Lowell Village appears eligible for the State Register. The building has asbestos shingle siding, a two-tier bell tower capped by a dome, and arched multi-pane windows on the first floor. Looking southwest from the front of the church, the Project will be visible at approximately 3 miles in the distance.

16. Nelson Farm “Breezy Acres” (map site 3), .83 mile.

Photographs 3 - 11

Because the Nelson Farm, called Breezy Acres, is so close to the Project, more research was conducted for this property than others with the potential for effects from the Project in order to clearly understand the significance of the site.

The Nelson Farm, comprising 570 acres in Lowell, was listed in the State Register on 9/23/2003 when the Vermont Advisory Council voted to list the site. According to the SR form, the house was built c. 1810. The form states the house is significant as an “excellent example of early plank construction in which thick vertical planks form the structural wall between the elements of the house’s post and beam frame.” While not highly usual or rare, this construction type is found in Vermont’s earliest structures when wood from virgin forests was plentiful as a building material. The SR form provides further information on the significance of the architecture and the setting. “Its location on the Bayley-Hazen Road, one of the first roads in the state, marks it as an example of the types of homes constructed by Vermont’s pioneer settlers. The 5-bay, gable front is unusual and belongs to the tradition of early “Noah’s Ark” houses found in the Connecticut River Valley, and its major offshoot transportation routes in eastern Vermont. The Bayley-Hazen Road headed northwest from the Connecticut River, and this house may be the westernmost example of the type in northern Vermont. The road to the house traverses extensive open pasture with a mountain backdrop behind the house to the west, and distant mountain views to the east. Beyond the house and barn, the Bayley Hazen Road becomes a 2-track dirt lane.”

While the gable front form, plank construction and early date of the house are significant, many changes to the house in recent years have compromised its architectural integrity to some degree, although it continues to be eligible for the SR. The windows are modern replacements, the attached barn and connector to the house are not historic (over 50 years old), and a new oriel bay window is located on the rear elevation. Much of the interior has changed as well, including a new central staircase. The bay window on the front was added c. 1905 and is considered significant, as is the hardwood flooring in which the room with the bay window is located. Much of the wall and wood trim details inside are new, and the ceiling beams have been exposed on the first floor.

The historic bank barn, which probably dates from around 1890, was dismantled and moved from Woodbury Village on Route 14, where it was owned by the Drennan family, to this site in 1947. Rebuilt against a sloping bank of land on its new site, the historic barn retains its characteristic high drive entrance on the west end, metal roofing and ventilator, and milking parlor appendage on the front (east end). Much of the historic vertical board siding has been covered with metal siding. According to the current owners of the Nelson Farm, this barn replaced two other barns that were in poor condition and were taken down. A smaller, gable roof barn on the east side of the road was built in 1976 and is not considered historic due to age.

The landscape surrounding the Nelson Farm is significant because it continues to reflect the historic agricultural context of the property as it was used throughout most of the 19th and much of the 20th century before the Nelson family ceased their farming operations. Based on deed research at the Lowell Town Clerk’s office, the Nelson family has owned the farm since the early 1940s and for many years operated a dairy farm there. The dairy farm is no longer in

operation and the milking parlor on the ground level of the barn is not used today, however, a small herd of cows pastures on the property during the summer.

The use of the land for agriculture goes back to the early 19th century when the site was characterized as a small diversified farmstead, one of thousands of such farms that existed throughout the state. The *Beers* map of 1878 for Lowell shows the site as owned by H. E. Stannard, with three other farmsteads spaced to the north along the Bayley Hazen Road before it cut through the Lowell Mountains. According to Agricultural Census records for 1880, these farms represented typical agricultural trends of the time. The farmers owned sheep and dairy cows, and produced barley, oats, Irish potatoes, maple syrup and apples.

Due to alterations over time to the house, such as the addition of the modern connector and garage and new windows, as compared to the intact condition of the surrounding 19th century landscape, it appears that the setting of the property rises above the significance of the buildings on the property. The historic context of the Nelson Farm is intact, and from many vantage points near the buildings as well as approaching them from the southwest along the Bayley Hazen Road, the viewshed is remarkable in its integrity. From many vantage points on the property, near or adjacent to the historic structures, the Project will be visible on the ridge of the Lowell Mountains to the west.

5. DETERMINATION OF POTENTIAL EFFECT

Based on review of Landworks' Potential Viewshed Map, photographic simulations, fieldwork and literature review, I have made the following considerations and determinations.

The area of Vermont within the viewshed comprises a complex landscape in which numerous hills of varying sizes and shapes, small mountains and diverse vegetation all contribute to a rich scenic environment and obstruct many actual views toward the Project. Where any given feature or element is visible, its perceived size diminishes significantly with distance as the view around and beyond the element expands.

Four considerations that primarily involve distance and visibility were taken into account to determine impacts on historic resources from the Project.

- 1) Distance of historic resource from the turbines.
- 2) Setting: Is the historic setting intact or has it been compromised?
- 3) Primary viewshed: The primary viewshed is generally agreed to be from the front (i.e. most significant) elevation of a historic resource; is the view intentional as to how the building was constructed?
- 4) Other important views: Are other views from the historic resource more significant than views of the Project?

This historic resource review has determined that the presence of the Project within the foreground view (within ½ mile) and nearer portion of the middle ground view (up to approximately 3 miles) from a historic property could potentially alter characteristics of the setting that qualify the property for inclusion in the State or National Registers, if in fact the property's setting is integral to its significance. However, locations in which the Project would

be visually perceived as simply another element in a large and varied landscape (generally around and beyond 3 miles) would not fall within the area in which the Project would have demonstrable potential to affect historic properties. Therefore properties within the 3 mile viewshed were analyzed most carefully for potential impacts, although properties beyond the 3 mile radius within the 3 to 10 mile radius were also reviewed as many historic sites exist throughout the entire APE. Of the 16 properties included in the historic resource review inventory that could be affected by the undertaking, 9 are within the 5-10 mile viewshed, 3 are within the 3 to 5 mile viewshed and 4 are within the 3-mile viewshed.

A. Historic Structures Within a Five to Ten Mile Radius

Historic resources within the 5 to 10 mile radius, and from which the proposed turbines would be visible within a primary viewshed, would not be adversely affected due to their distance from the ridgelines on which the turbines are proposed. A primary viewshed is the view of the landscape from a point adjacent to or within a building at which one can best appreciate the setting of the property – this view is usually from the front elevation of a property’s main building, usually a house or public building such as a church. At a distance of 5 to 10 miles from the Project, the turbines would not dominate the viewshed due to their diminished size when observed from such a distance. If the turbines become visible as part of a broad viewshed, the turbines would only comprise a small portion of the viewshed and would not substantially alter the viewer’s ability to appreciate the qualities of the overall landscape. Beyond five miles, in which views from properties include the turbines, the turbines would appear very small and insignificant due to their location in the distance or background of the landscape. Beyond five miles, if the turbines can be seen at all, they would be part of a broad landscape that includes many other hills, mountains and ridgelines, and the turbines would not overwhelm the viewer’s enjoyment of the landscape.

Significant historic resources identified in the inventory (map sites 1, 4, 5, 6, 7, 12, 13, 14, 15,) that are located within the 5 to 10 mile radius include Tillotson Camp on the Long Trail, Hitchcock Memorial Library & Museum and the Daigle Farmhouse in Westfield, the Irasburg Green, Irasburg Town Hall, East Albany Church, Craftsbury Common Historic District, Old Babcock Place in Craftsbury, and the East Craftsbury Historic District. Views of the Project from these sites will be limited at best and will not compromise the settings of the resources. No historic resources were found in the 5 to 10 mile radius that appear to have the potential for an adverse effect from the Project.

B. Historic Structures Within a Three to Five Mile Radius

Historic resources within the 3 to 5-mile radius (map sites 10, 11, 16), and from which the proposed turbines would be visible within a primary viewshed, would not be adversely affected due to their distance from the ridgelines on which the turbines are proposed. From a distance of 3 to 5 miles the visual impact of the turbines would not be remarkable as the turbines would appear as only a component of a broader landscape comprised of many other elements in the foreground, middle ground and distance.

Examples of historic properties that have primary views of the turbines within a 3 to 5 mile radius include the Classic Cottage on Delano Road in Albany at 4 miles distant, the cape house at Albany Center at 3.5 miles away, and the Eden Historic Camp District also at 3.5 miles distant. The turbines will be evident in the viewshed from 3 to 5 miles, but they will not appear large or dominant in the landscape to the viewers' eye from that distance. No historic resources were found in the 3 to 5 mile radius that appear to have the potential for an adverse effect from the Project.

C. Historic Structures Within a Zero to Three Mile Radius

Views of the turbines from historic resources within the 0-3-mile radius (map sites 9, 8, 2, 3) move to the middle ground and thus have greater potential for effects. From many vantage points, it appears that the turbines have been sited in a manner that even at this mid-ground distance, significant architectural resources would not be affected. This is because the turbines would be located on ridges that are largely surrounded by wooded land where no homes have been built. Most occupied, existing buildings are located below the ridgelines so that the turbines at this close proximity often would be completely or largely hidden from view due to topography or vegetation. For example, most of the buildings on Route 100 in Eden and south of Lowell Village, and on Route 14 in Craftsbury and Albany will not have clear views of the Project. Three resources that have the potential for effect, however, which are between 2.25 and 3 miles from the proposed Project are the Maple Valley Grange, and a house and associated barn on Route 14 in Albany, and the Lowell Congregational Church on Route 100. It appears that the views from the Lowell Congregational Church, approximately 3 miles from the Project, will be partly obscured by trees and buildings in the village; the structures and vegetation in the foreground, rather than the more distant turbines will tend to dominate the viewshed toward the Project from the village. Regarding the historic house and Grange on Route 14, which are located approximately 2.25 and 2.5 miles respectively from the Project, the turbines will be clearly visible to the west of these two sites when driving on Route 14. However, the viewshed from these sites is broad, and encompasses views to the north and south along the relatively straight roadway, as well as farmsteads on both sides of the road so that the proposed turbines will not likely dominate the landscape or viewshed in these areas of the APE. No historic resources were found in the 1 to 3 mile radius that appear to have the potential for an adverse effect from the Project.

One property within the one-mile radius has the potential for an adverse effect from the Project. This is the Dan and Shirley Nelson Farm, a 570 acre farmstead called Breezy Acres located east of the Lowell Mountains in Lowell. As discussed above, under Section 4, the significance of this farmstead is comprised of three major components: 1) the house's c. 1810 construction date that marks it as an early dwelling in northern Vermont and its somewhat rare plank construction building method, 2) the existence of the Bayley Hazen Military Road, which crosses the property in front of the house, and 3) the intact appearance of the surrounding landscape, which continues to reflect the agricultural heritage of the property.

The Project will be located approximately .83 miles west of the Nelson buildings on the ridge of the Lowell Mountains. The farmstead is sited near the center of the line of turbines that will project above the mountain peaks and will appear in the viewshed from many vantage points at the Nelson Farm. When approaching the farm from the south on the Bayley Hazen Road, the

turbines will be visible before one crosses the Albany / Lowell town line. With the historic landscape visible on both sides of the road from the town line to the Nelson farm buildings and beyond where the Bayley Hazen Road becomes a 2-lane track and enters wooded land, the turbines will remain generally constant at the upper range of one's viewshed, and at the close distance of approximately .83 miles, the turbines will appear large in the landscape. At a distance of approximately .83 miles at the Nelson Farm, the Project would have the potential for an adverse effect on the Nelson Farm.

6. SUMMARY ASSESSMENT OF EFFECT USING THE *MIDDLEBURY* ANALYSIS

The following three-part test was used to evaluate impacts on historic sites, as articulated by the Environmental Board in its *Middlebury College* decision:

1. Whether the proposed project is historic.

10 V. S. A. 600(9) provides:

“Historic site” means any site, structure or district or archaeological landmark which has been officially included in the National Register of Historic Places and/or the state register of historic places or which is established by the testimony of the Vermont Advisory Council on Historic Preservation as being historically significant.

Accordingly, there are three ways in which a site's historic nature may be established under Act 250:

- (1) placement on the National Register of Historic Places;
- (2) placement on the Vermont register of historic places; and
- (3) persuasive evidence of historic significance brought before the Board or District Commission by the testimony of the Vermont Advisory Council on Historic Preservation.

2. Whether the propose project will have an adverse effect on the historic site.

In evaluating adverse effect on a site, it is central to determine whether a proposed project is in harmony or fits with the historic context of the site. Important guidelines in evaluating this ‘fit’ include: (1) whether there will be physical destruction, damage, or alteration of those qualities which make the site historic, such as an existing structure, landscape, or setting; and (2) whether the proposed project will have other effects on the historic structure, landscape, or setting which are incongruous or incompatible with the sites' historic qualities, including, but not limited to, such effects as isolation of an historic structure from its setting, new property uses, or new visual, audible or atmospheric elements.

3. Whether the proposed project's adverse effect will be undue.

The ‘undue’ quality of an effect on a historic site can be judged in several different ways. A positive conclusion on any one of the following guidelines can lead to a determination that an adverse effect is undue:

- a. The failure of an applicant to take generally available mitigating steps which a reasonable person would take to preserve the character of the historic site.
- b. Interference on the part of the proposed project with the ability of the public to interpret or appreciate the historic qualities of the site.
- c. Cumulative effects on the historic qualities of the site by the various components of a proposed project which, when taken together, are so significant that they create an unacceptable impact.
- d. Violation of a clear, written community standard which is intended to preserve the historic qualities of the site.

The review for potential impacts discussed above assesses the potential for adverse effects to the resources. Based on field work, research of DHP files, and review of Landworks viewshed maps and various simulations the following determinations can be made.

- 1) The Project will not result in any physical destruction, damage or alteration of the qualities which make important resources historic, such as an existing structure, landscape or setting.
- 2) Overall, the Project will not have other effects on the historic structures, landscape or setting which are incongruous or incompatible with the sites' historic qualities, including, but not limited to such effects as isolation of an historic structure from its setting, new property uses, or new visual, audible or atmospheric elements. The one exception is at the Nelson Farm where the Project will have a new visual effect on the backdrop of the farm from some views; however the physical historic qualities of the farm will not be affected by the Project.
- 3) The Project has the potential for adverse effect at such significant sites as the Nelson Farmstead, but the effect will not be undue as explained below.
 - a) The Project has taken reasonable mitigating steps to preserve the character of the historic sites in the APE by selecting the location for the Project in a forested area that is undeveloped in terms of housing and other historic resources. However, one significant historic resource in the Project is .83 miles distant (Nelson Farmstead), and from some views on the Nelson Farm the Project will be clearly visible in the background above the buildings and surrounding fields of the property.
 - b) The Project will not interfere with the ability of the public to interpret or appreciate the historic qualities of the significant historic resources in the APE primarily because the Project is sufficiently distant from these resources, and the context of the areas surrounding some resources such as in the villages of Lowell and Eden have already undergone alteration and change due to modern encroachment or alterations to historic buildings.

Even where the large and clearly modern turbines are part of the backdrop in some views at the Nelson Farm, the public will still be able to interpret and appreciate the historic qualities of the property. The Project will not necessarily interfere with the public's ability to interpret the historic qualities of the Nelson Farm, because of the very cohesive 19th century character of the farmstead that is comprised of the generally intact plank frame house, the large high-drive type bank barn, and the preserved landscape with the Bailey-Hazen Road cutting through the farm fields that extend around the buildings and beyond to the east. Even with the turbines to the west as a backdrop, the public will still be able to read the distinctive character of the farmstead including the broad, open fields that extend to the east. Therefore it does not result in a conclusion that the Project would result in an adverse effect that is undue.

- c) The cumulative effects of the Project on the qualities of the historic resources with the potential for adverse effect from the Project are not so significant or substantial that they create an unacceptable impact. The effects of the Project on the Nelson Farm are substantial and will clearly impact the public viewshed of the property when approaching it from the south or north along the Bayley-Hazen Road; however, the impact of the Project does not rise to the level of an undue adverse effect.
- d) As noted in the review of Town Plans for towns in the APE, the Project will have no known violation of a community standard which is intended to preserve the historic qualities of the sites or the essential character of the towns in the APE.

7. ASSESSMENT OF EFFECT USING THE CRITERIA FOR EVALUATING THE EFFECT OF TELECOMMUNICATIONS FACILITIES AND TRANSMISSION LINES ON HISTORIC RESOURCES

The Project was reviewed using the fourteen criteria developed by the VDHP to determine the effect of telecommunications facilities and transmission lines. According to the Criteria, "Evaluations of Project impacts should be made on an individual case-by-case basis and should focus on direct and indirect impacts of a substantial nature." Thus a Project may have an adverse or undue adverse effect when either a "substantial" direct or indirect impact could occur.

A Direct Impact is one that would "*cause physical damage, alteration or destruction of an historic resource*," items 1-5 of the criteria. The Kingdom Community Wind Project would not have a Direct Impact on extant historic structures within the Project's area of potential effect.

An Indirect Impact is one that would "*cause significant alteration and deterioration of the setting or character of an historic resource*." Examples of such impacts are provided in items 6-14 of the Criteria.

Criterion 6 is an indirect impact where *“installation of the [wind turbine] facility would create a significant intrusion into important public views of an important historic building or group of buildings, especially when those views are identified in municipal or regional plans.*

From nearly all vantage points within the APE, the Kingdom Community Wind project would not create a significant intrusion into important public views of an important historic building or group of buildings, such as those around the Irasburg Town Green or the Craftsbury Common Historic District. However, at the Nelson Farm, the turbines would create a significant intrusion into public views of the Nelson Farmstead when viewed from the public road, the Bayley Hazen Road. The turbines would be clearly visible when approaching the property from the south with the Lowell Mountains in the background. These views are not identified in municipal or regional plans.

Criterion 7 is an indirect impact where *“installation of the [wind turbine] facility would create a significant intrusion into a hillside backdrop of an important historic building or group of buildings.”*

As noted above under Criterion 6, from nearly all vantage points, the turbine facility would not create a significant intrusion into a hillside backdrop, such as at the Maple Valley Grange where at 2.5 miles distant the turbines would encompass only a portion of a broad viewshed from this site, and at the Lowell Congregational Church, at 3 miles from the Project the views of the turbines would be largely obscured by vegetation and other buildings in the village. Only at the Nelson farm would the turbines create a significant intrusion into the hillside backdrop of this farmstead.

Criterion 8 is an indirect impact where *“the siting of the [wind turbine] facility would create a focal point that would overwhelmingly disrupt and distract from the elements of an historic landscape and the public’s ability to appreciate it.”*

While most historic resources within the APE would likely not be substantially impacted by views of turbines, the impact on the Nelson Farm must be carefully considered due to the historic significance of the site, its location on the Bayley Hazen Road, and its intact agricultural setting. It appears that the Project would have an adverse effect on the viewshed of the Nelson Farm when approaching it from the south on the Bayley Hazen Road when the turbines would be presented as clearly visible above the hillside backdrop. Although the turbines could appear as a focal point from this distance when approaching the site, the site would still be clearly read as a historic landscape, and the public would be able to appreciate the landscape even with the turbines in the background. When viewing the landscape from a vantage point close to the buildings, the turbines would be in the background, above the structures and specific historic landscape associated with the agricultural heritage of the site. From most views adjacent to the buildings that comprise the broad viewshed to the north, east and south, and encompass the distant views across the open fields, the historic context of the site would be clearly evident and not overwhelmingly disrupted by the Project.

Criterion 9 is an indirect impact where *“the [wind turbine] facility would create an intrusion in the setting of a National Historic Landmark (which requires additional federal review by the national Advisory Council on Historic Preservation).”*

No National Historic Landmark sites exist in the 10-mile viewshed area.

Criterion 10 is an indirect impact where *“the [wind turbine] facility would create a significant intrusion in a rural historic district or historic landscape with a high degree of integrity, i.e. with little incompatible modern development.”*

The Nelson Farm retains a historic landscape with a high degree of integrity; however, the buildings have undergone some modern changes to design and materials primarily due to the addition of the attached garage and connector, and new windows on the farmhouse; modern metal siding on the barn; and the smaller, new barn. The turbine facility would appear to create a significant intrusion in the historic Nelson Farm landscape, especially when viewed from the south when the turbines will be part of a hillside backdrop.

Criterion 11 is an indirect impact where *“installation of the [wind turbine] facility would significantly impair the viewshed from an historic resource if that viewshed is a significant component of the character of the historic resource and its history of use (e.g. the home of an important artist whose work portrayed the viewshed landscape.)”*

The viewshed from the Nelson Farmstead is not known to be significant to the history of the use of the property.

Criterion 12 is an indirect impact where *“installation of the [wind turbine] facility would significantly interfere with the public’s ability to interpret and appreciate the qualities of a historic cultural facility, including impairment of the viewshed if experiencing the view from the site is an important part of experiencing the site.”*

Experiencing the view when approaching the farmstead from the south would be interfered by having the turbines in the background at one mile away, which would have an indirect impact on the integrity of the well-preserved agricultural landscape which continues to reflect its 19th century rural heritage. However, even with the turbines in the background, the public will continue to have the ability to interpret and appreciate the historic visual qualities of the buildings and the context of the site as a cohesive farmstead including its intact open agricultural landscape.

Criterion 13 is an indirect impact where *“installation of the [wind turbine] facility would introduce a structure that would be dramatically out of scale with and would visually overwhelm an important historic resource.”*

At a distance of approximately one mile, the proposed turbines could visually overwhelm the Nelson farmstead and be dramatically out of scale when the turbines are viewed as a backdrop to the house and barns. However, the viewshed also includes the very intact, distant and broad views to the north, east and south. These intact views of the landscape to the north, east and south define the overall historic character of the site, and would help mitigate the impact of the views of the hillside backdrop of the ridge with the turbines.

Criterion 14 is an indirect impact where *“installation of the [wind turbine] facility would isolate the historic resource from its historic setting, or introduce incongruous or incompatible new uses, or new visual, audible or atmospheric elements.”*

The wind turbine facility will not isolate historic resources from their historic settings. The turbines will be sufficiently distant from the historic resources to not introduce new audible or atmospheric elements. The wind facility would be a new use on the Lowell Mountains, yet it is not incongruous. A wind farm is part of a working landscape. The turbines will be much taller than wind mills frequently used in the 19th century agricultural landscape, yet their use is associated with these earlier structures. Like the historic wind mills, today's wind turbines are not necessarily permanent features on the landscape. They may be removed at a later date when they are no longer needed and the landscape will remain intact without permanent change or intrusion.

Transmission Lines

The potential effect of the components of the transmission line were reviewed in the field and researched on Project maps that detail the locations of the components of the transmission line. These components as described in Section 2 above, Description of the Proposed Project, include the new access road to the site of the turbines on the Lowell Mountain ridgeline, the location of the collector system, the alignment of the transmission line as it extends along Routes 100 and 105, a new substations (KCW substation), and the upgrades to two existing substations (Lowell #5 and Jay #17). The substations, both new and existing will not be significantly large or tall, and they will be shielded from view by vegetation from the public right-of-way. A 5 to 15 foot increase in pole height is planned, with most of the alignment in the existing right-of-way and the height of existing substation components increasing by up to 21 feet.

The character of the roadway comprising the length of the transmission line alignment varies from wooded to open farmland. The section of Route 100 from the access road to the village of Lowell is primarily wooded. At the intersection of Routes 100 and 58, the alignment along Route 100 opens up to farmland and working farms to the village of Westford. Again, north of Westford village on North Hill Road to Kennison Road, the landscape opens to farmland and an especially picturesque stretch of roadway with mature maple trees that parallel both sides of the road for approximately 2 miles. Along this portion of the town road, the transmission lines are largely set back away from the road and maple trees, avoiding both visual and physical impacts to the historic landscape. North of Kennison Road for the remainder of the transmission line where it ends at the Jay Tap substation, the roadway is primarily wooded.

In summary, throughout the entire length of the proposed transmission line, some of which is outside of the APE north of Westford Village and in the Town of Jay, no significant historic resources or landscape features were determined to have the potential for adverse impacts from the proposed transmission line. Although the transmission line will pass by numerous buildings and structures, only one, the Lowell Congregational Church in Lowell Village on Route 100 was identified in this report as significant, and no historic structures, including the Lowell Congregational Church will be adversely affected by the Project. Visual effects from the transmission line will not be substantially different than the existing impacts from the current transmission lines along Route 100 and 105. In addition, the new access road, maintenance building and adjacent KCW Substation on the wooded hillside of Lowell Mountain may be partially visible from some locations in the distance, but the visual impacts would not be adverse.

8. RECOMMENDED MITIGATION MEASURES

To the extent that the VDHP requires that the adverse impacts of the project be lessened or mitigated in some manner, through a formal Memorandum of Understanding and/or through conditions to the PSB's approval, such measures could include the following:

1. Develop a Removal and Reclamation Plan for the turbines that would be implemented at the time the project is decommissioned.
2. Kingdom Community Wind funding in support of a historic resources inventory project or a reasonable contribution for another historic preservation project in the affected towns. (Lowell and Albany could benefit from a survey for listing structures in the Vermont Historic Sites and Structures Survey /State Register), and other towns such as Eden, which were surveyed for the State Register in the 1970s and early 1980s, would benefit from an updated State Register survey.
3. Develop an interpretive exhibit at the public recreation site on Lake Eden, the Lowell Town Offices or another appropriate location that explains the Kingdom Community Wind Farm and renewable power generally.

9. CONCLUSION

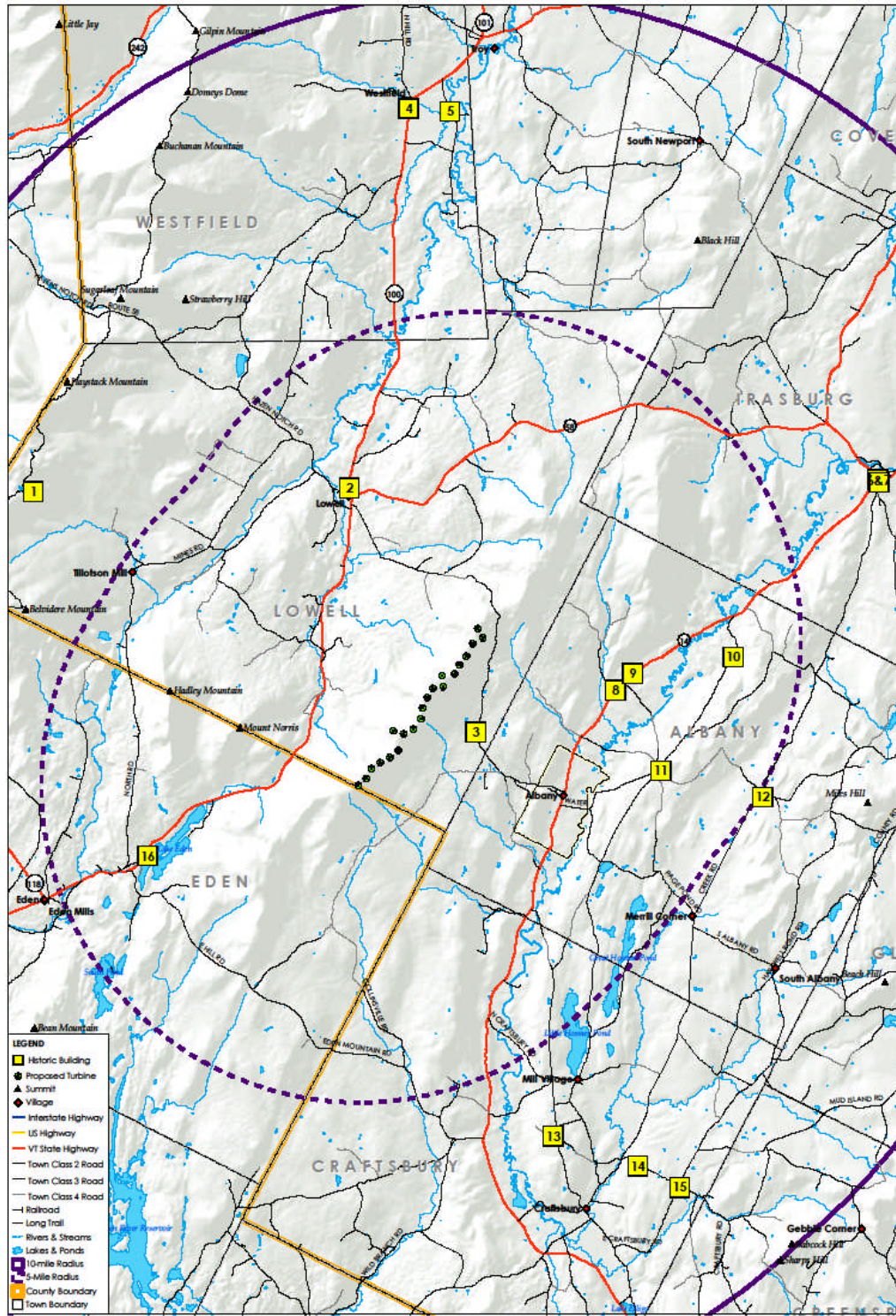
This historic resource review report provides a thorough investigation of the breadth of the APE for the Kingdom Community Wind Project, the significance of the historic resources in the 10-mile viewshed area, and the potential to impact the inventoried 16 resources determined significant within a 10 mile radius of the Project.

All but one of the identified, significant historic resources will be more than one mile from the Project located on the ridgeline of the Lowell Mountains in Lowell, Vermont. At the distance of more than one mile, the turbines will not overwhelm or dominate the setting and characteristics that qualify the historic resources for listing in the State and National Registers, nor will they affect the ability of the public to interpret and appreciate these resources. One significant resource, the Nelson Farmstead, which is less than one mile from the Project, would likely be adversely affected by the Project because of the close proximity of the Project to the Farmstead, and the significant visual intrusion the turbines would create on the hillside backdrop of the site. However, even with the intrusion of the turbines on the ridgelines above the Farmstead, the public would still be able to appreciate and interpret the historic qualities of the Nelson Farm. The character of the other significant landscape features and historic structures in Lowell, Albany, Eden, Craftsbury and surrounding towns will not be substantially affected by the installation of this wind turbine facility.

The Kingdom Community Wind Project comprising the installation of 20-21 wind turbines on the Lowell Mountains has the potential for an adverse effect to historic, above-ground resources. Of the many individual sites and five historic districts listed in the APE, one individual site, the Nelson Farm, has been determined to clearly have potential for an adverse effect; however, the effect would not be undue.

ATTACHMENT A

Map of Historic Building Locations



NOTE: Map based on GIS data available at the time from VCGI & GMP. Historic building locations identified by Liz Pritchett. Data is only as accurate as the original source and is not guaranteed by LandWorks. For planning purposes only.

Historic Building Locations Map

Kingdom Community Wind



0 6,000 12,000 Feet

Prepared for Green Mountain Power
Prepared by Liz Pritchett Associates
Mapping by LandWorks

Date: 4/19/2010
Drawn by: NS

ATTACHMENT B

Photographs of Architectural Resources identified on Historic Building Locations Map

LOWELL



Photograph 1

Site 1. Tillotson Camp, 1939, Long Trail. 7 miles from Project.



Photograph 2

Site 2. Congregational Church, Lowell Village, Route 100. 3 miles from Project.



Photograph 3

3) Site 3. Nelson Farm, Breezy Acres, Bayley-Hazen Road, less than 1 mile from Project. Lowell Mountains are west of (behind) buildings.



Photograph 4

Site 3. Approaching Breezy Acres on Bayley-Hazen Road. House and large historic barn at center, modern barn on right on east side of road.



Photograph 5

Site 3. View from road showing farm fields, cows at pasture on left.



Photograph 6

Site 3. C. 1810 house with its modern garage and connector appendages; barn on right.



Photograph 7

Site 3. View to northwest of house toward ridge of Lowell Mountains where Project is proposed.



Photograph 8

Site 3. Modern barn at east side of road, view looking south.



Photograph 9

Site 3. Large barn, showing highdrive at right, milkhouse appendage on front (left).
View looking south from Bayley-Hazen Road.



Photograph 10

Site 3. View to the east from Bayley-Hazen Road in front of Nelson House across farm fields towards mountains in distance.



Photograph 11

Site 3. Bayley-Hazen Road north of Nelson house where it becomes a recreation trail.

WESTFIELD



Photograph 12
Site 4 Hitchcock Memorial Library & Museum, Westfield Village.
View looking northwest. 8.5 miles from the Project.



Photograph 13
Westfield Village, view from Route 100 looking southeast toward Lowell Mountains approximately 8.5 miles in the distance.



Photograph 14
Site 5 Daigle Farmhouse (1837), view from Carter Road looking south to Lowell Mountains approximately 8 miles in the distance.



Photograph 15
Site 5. Daigle barns located north of the farmhouse; view looking west.

IRASBURG



Photograph 16

Site 6 Irasburg Green (potential) Historic District, and site 7 Town Hall.

View looking east across the green to the Town Hall (1911) on left; general store on right.



Photograph 17

Site 6 Irasburg Green (potential) Historic District, view looking westerly to ridge that is north of the Project.



Photograph 18

Site 6. Irasburg Green (potential) Historic District. Looking southeast to Irasburg United Church from the general store (see photo at top of page) shows physical intrusions in views toward the project approximately 71 miles distant.

ALBANY



Photograph 19

Site 8. Route 14 house and barn, view to southwest with Lowell Mountains 2.25 miles distant.



Photograph 20

Site 9. Maple Valley Grange No. 450, Route 14.
Project is 2.5 miles distant at ridge behind (west) of Grange.



Photograph 21

Site 10 .Classic Cottage, Delano Road. Project is proposed on ridge
Behind (west of) house, 4 miles distant.



Photograph 22

Site 10. Classic Cottage, view to southwest from Delano Road showing
Lowell Mountains, 4 miles distant.



Photograph 23
Site 11. Cape, Albany Center. View looking northeast from Center Road.



Photograph 24
Site 11. View from Cape at Albany Center to Lowell Mountains, Approximately 3.5 miles away.



Photograph 25
Site 12. East Albany Church. View looking northeast.



Photograph 26
Site 12. View from East Albany Church site looking southwest toward the Project, 5.2 miles distant.

CRAFTSBURY



Photograph 27

Site 13. Craftsbury Common Historic District.

View west across Common; view of Project would be northwest from the Common.



Photograph 28

Site 14. Old Babcock Place, 398 Ketchum Hill Road, view looking north.



Photograph 29

Site 14. Typical view to west from Ketchum Hill Road,
mountain ridge and Project at far right of photo approximately 7.75 miles distant.



Photograph 30

Site 15. East Craftsbury Historic District. View to west toward United Presbyterian Church (1909) with Lowell Mountains on right approximately 8 miles distant.

EDEN



Photograph 31

Site 16. Eden Historic Camp District. View looking northerly toward two historic camps.



Photograph 32

Site 16. View from Lake Eden northerly toward Lowell Mountains, which are mostly blocked from view by peaks that are closer to the lake. Project will be 3.5 miles distant.